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Self-assembly of nanosized aggregates based on the photoswitchable p-tert-butyl thiacalix[4]arene derivative and Fe III, Cu II, and AgI cations

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Abstract

New p-tert-butyl thiacalix[4]arene tetrasubstituted at the lower rim and containing the azobenzene fragments in the 1,3-alternate configuration was synthesized. Its receptor properties with respect to d-metal cations (Fe 3+, Cu2+, Ag+) were studied using UV spectroscopy and dynamic light scattering (DLS). The ability of p-tert-butyl thiacalix[4]arene to molecular recognition of silver cations was estimated by UV spectroscopy. The aggregation of these systems was studied by the dynamic light scattering method. © 2009 Springer Science+Business Media, Inc.

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Keywords

Dynamic light scattering (DLS), Molecular recognition, Photoswitchers, Self-assembly, Silver cations, Thiacalix[4]arenes